MODIS IOT Weekly Report
Mission Operations Days: 2000/057 to 2000/063
February 26, 2000 20:00:00 GMT to March 3, 2000 20:00:00 GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode
MODIS is in Science Mode
MODIS has no known Anomalies

Blackbody		On	Nominal
Calibration Electronics		On	Nominal
Control Processor		A On; B off	Nominal
Door: Nadir		Unlatched, open	Nominal
Space View		Unlatched, open	Nominal
Solar Diffuser		Unlatched, closed	Nominal
FDDI Formatter		On	Nominal
FIFO Memory		On	Nominal
Format Processor		On	Nominal
PC FPA		On	Nominal
Power Supply: 1		On	Nominal
2		Off	Nominal
PV FPAs: VIS		On	Nominal
NIR		On	Nominal
SMIR		On	Nominal
LWIR		On	Nominal
Radiative Cooler:			
Outgas Heaters		Off	Nominal
LWIR FPA Heater		On	Nominal
SMIR FPA Heater		On	Nominal
Scan Assembly		On	Nominal
SDSM		Off	Nominal
SRCA		Off	Nominal
Survival Heaters:	PS1	Enabled	Nominal
	PS2	Enabled	Nominal
Timing Generator		A On, B Off	Nominal
Flight Software		Rev BD	Nominal
Inhibit Ids Set		None	Nominal
TMONs enabled		66,67	Nominal

This Week's Completed MODIS Activities:

Saturday, February 26th, 2000
057/20:30 Real-time - - Turn off BB

Sunday, February 27th, 2000

058/02:04:11 ATC – OA15: SD/SDSM Open Double
058/08:39:42 ATC – OA16: SD/SDSM Screened Double
058/11:50 – 12:40 DATA LOSS – unknown downlink reasons. Non-recoverable.
058/14:44:10 Real-time - - Set Itwk/Vdet to 110/220
058/14:45:26 Real-time - - Tun on BB and set to 315K
058/15:15:13 ATC – OA16: SD/SDSM Screened Double
058/18:03 Real-time - - Turn off BB
058/21:50:44 ATC – OA15: SD/SDSM Open Double

Monday, February 28th, 2000
059/04:26:15 ATC – OA16: SD/SDSM Screened Double
059/11:01:46 ATC – OA15: SD/SDSM Open Double
059/12:00:00 ATC – SRCA Full Radiometric
059/12:40:39 ATC – OA16: SD/SDSM Screened Double
059/13:48 Real-time – Reset Itwk/Vdet to nominal values (110/226)
059/13:50 Real-time – Turn on BB
059/13:51 Real-time – Set BB to 290K
059/15:02 Real-time – Set BB duty cycle to 33%
059/19:08 Real-time – SMIR VDET Sweep, Itwk = 190, Vdet = 159, 10 steps of 8
059/19:17 Real-time – Reset SMIR Itwk to 110 and Vdet to 226
059/19:43 Real-time – SMIR VDET Sweep, Itwk = 210, Vdet = 159, 10 steps of 8
059/19:53 Real-time – Reset SMIR Itwk to 110 and Vdet to 226
059/20:42 Real-time – SMIR VDET Sweep, Itwk = 230, Vdet = 159, 10 steps of 8
059/20:51 Real-time – Reset SMIR Itwk to 110 and Vdet to 226
059/22:01 Real-time – SMIR VDET Sweep, Itwk = 250, Vdet = 159, 10 steps of 8
059/22:10 Real-time – Reset SMIR Itwk to 110 and Vdet to 226
059/22:33:56 ATC – OA16: SD/SDSM Screened Double

Tuesday, February 29th, 2000
060/03:30:34 ATC – OA16: SD/SDSM Screened Double
060/08:27:12 ATC – OA15: SD/SDSM Open Double
060/12:00:00 ATC – SRCA Full Spatial
060/15:02:43 ATC – OA16: SD/SDSM Screened Double
060/19:59:22 ATC – OA16: SD/SDSM Screened Double

Wednesday, March 1, 2000
061/00:56:00 ATC – OA15: SD/SDSM Open Double
061/05:52:38 ATC – OA16: SD/SDSM Screened Double
061/06:44:56 ATC – SRCA Full Spectral, 30W part I
061/08:39:39 ATC – SRCA Full Spectral, 30W part II
061/10:02:05 ATC – SRCA Full Spectral, 10W part I
061/11:57:24 ATC – SRCA Full Spectral, 10W part II
061/14:07:02 ATC – OA16: SD/SDSM Screened Double
061/20:42:33 ATC – OA15: SD/SDSM Open Double
061/21:00:00 Real-time - - BB Duty Cycle to 100%
061/21:30:00 ATC – BB On to 315K

Thursday, March 2, 2000

062/05:10:56 – 05:16:04 – Sector Rotation of heated BB (DCR Off)
062/05:30:00 ATC – BB Off
062/06:35:47 ATC – OA16: SD/SDSM Screened Double
062/09:53:33 ATC – OA16: SD/SDSM Screened Double
062/16:29:04 ATC – OA15: SD/SDSM Open Double
062/21:25:42 ATC – OA16: SD/SDSM Screened Double
062/22:45 Real-Time - - BB Duty Cycle to 33%
062/23:51:18 Real-Time - - Flight Software Inhibit Group 31 Reset
062/23:58:07 Real-Time - - BB Duty Cycle to 33%
062/23:59:17 Real-Time - - BB Turn On, A Side
062/23:58:07 Real-Time - - BB Temp Set to 290K (DN = 1287)

Friday, March 3, 2000
063/04:01:12 ATC – OA16: SD/SDSM Screened Double
063/10:36:43 ATC – OA15: SD/SDSM Open Double
063/17:12:14 ATC – OA16: SD/SDSM Screened Double
063/23:47:45 ATC – OA16: SD/SDSM Screened Double

This Week's Scheduled MODIS Activities Not Completed:

Thursday, March 2, 2000
062/21:45 ATC – BB On to 290K
Flight Software Inhibit Group 31 was still set from previous day's MOD_BB_OFF (it was not reset). This Inhibit Group prevents ATC stored commands from executing for the Black Body.

Upcoming MODIS Events:

Friday, March 3, 2000
063/23:47:45 ATC – OA16: SD/SDSM Screened Double

Saturday, March 4, 2000
064/06:23:16 ATC – OA15: SD/SDSM Open Double
064/12:58:46 ATC – OA16: SD/SDSM Screened Double
064/14:48?? Real-time – Set SMIR Itwk / Vdet to 110 / 224
064/14:48?? Real-time – Set Blackbody duty cycle to 100%
064/14:48?? Real-time – Set Blackbody temperature to 315K
064/19:34:17 ATC – OA16: SD/SDSM Screened Double
064/22:51:55 ATC – Formatter to Day Rate (13:56 earlier than Nadir Term. Crossing)
This allows for all Bands to be recorded for the following activities.
064/22:51:57 ATC – PC DC Restore OFF
064/22:51:59 ATC – PV DC Restore OFF
064/22:52:01 ATC – Sector Rotation to –3400
064/22:52:03 ATC – OA16: SD/SDSM Screened Double
064/23:09:58 ATC – Sector Rotation to 0

064/23:10:00 ATC – PV DC Restore ON
064/23:10:02 ATC – PC DC Restore ON
064/23:10:04 ATC – Formatter to Night Rate (to make up for earlier Day extension)
064/23:10:04 ATC – Formatter to Day Rate (Back on track for nominal rate modes)
065/23:28?? Real-time – Set Blackbody temperature to 270K

Sunday, March 5, 2000
065/03:48:50 ATC – OA15: SD/SDSM Open Double
065/08:45:19 ATC – OA16: SD/SDSM Screened Double
065/13:41:56 ATC – OA16: SD/SDSM Screened Double
065/18:38:35 ATC – OA15: SD/SDSM Open Double
065/19:00?? Real-time – Set SMIR Itwk / Vdet to 110 / 228
065/19:00?? Real-time – Set Blackbody temperature to 315K

Monday, March 6, 2000
066/00:00?? Real-time – Set Blackbody temperature to 270K
066/00:00?? Real-time – Set Blackbody duty cycle to 33%
066/06:10:43 ATC – OA16: SD/SDSM Screened Double
066/11:07:21 ATC – OA16: SD/SDSM Screened Double
066/12:02:34 ATC – OA19: SRCA Full Radiometric
066/12:46:14 ATC – OA15: SD/SDSM Open Double
066/19:00?? Real-time – Set SMIR Itwk / Vdet to 110 / 226
066/21:00:37 ATC – OA16: SD/SDSM Screened Double

Tuesday, March 7, 2000
067/03:36:08 ATC – OA15: SD/SDSM Open Double
067/08:32:46 ATC – OA16: SD/SDSM Screened Double
067/10:11:38 ATC – OA16: SD/SDSM Screened Double
067/11:00:00 ATC – OA26: Set Blackbody to 285K
067/13:00:00 ATC – OA26: Set Blackbody to 290K
067/before 15:00 Real-time – Set Blackbody duty cycle to 100%
067/15:00:00 ATC – OA26: Set Blackbody to 295K
067/17:00:00 ATC – OA26: Set Blackbody to 300K
067/19:00?? Real-time – Set Blackbody temperature to 270K
067/19:00?? Real-time – Set Blackbody duty cycle to 33%
067/20:04:56 ATC – OA15: SD/SDSM Open Double
067/?? Real-time – ECAL sweep

Wed, March 15, 2000 - IRU Yaw and Roll Slews
Thus, March 16, 2000 - FSS Yaw and Roll Slews
Wed, March 22, 2000 - Drag Makeup Maneuver
Fri, March 24, 2000 - MODIS Roll Maneuver (-19 deg)
Sat, March 25, 2000 - MODIS Yaw Maneuvers
Sun, March 26, 2000 - MODIS Yaw Maneuvers
Mon, March 27, 2000 - Inclination Maneuver
Tue, March 28, 2000 - Post-inclination Drag Makeup Maneuver

MODIS Anomalies:

We had a red alarm at 2000/058:09:50:24 for MOD_VR_PVLW_RN5V. This has been a noisy tlm point all along, but a red alarm is new and unusual. This point was red for one cycle (65 sec) and then cleared. Things have been nominal ever since. No activities were executing at that time. Had the red limit safing procedure been run, Macro 0 would have executed resulting in MODIS exiting Science Mode. Macro 0 turns off the scan assembly, timing generator, all OBCs, etc.

General Instrument Comments:

MODIS is in Science Mode on the A-side with the SVD and NAD open. Functional checkout of MODIS is complete and was successful. All mechanisms behaved nominally.

First light occurred at 2000/055/15:27:09

MODIS Telemetry Trends:

Telemetry is nominal.

Non-MODIS Significant Events:0

On 2000-062 (22:00-23:00): A telemetry loss occurred just as a MODIS science data playback was beginning. Initial beliefs for the cause was an infringement on the MMS planning products “gray zone” for contact times. It appears that the attempted contact duration was slightly more aggressive than the S/C to TDRSS connection would allow. Before the next contact, the MODIS SSR buffer filled up, since it was pretty full when the previous contact was lost. In the process of doing an unscheduled science playback, to pick up what the previous failed playback missed, the sync-up with Whitesands did not transpire correctly and the playback was not recorded. By that time, loss of signal occurred for the short pass. At the beginning of the next pass, a successful playback was executed. So the times that there will be no science data for MODIS is:
2000-062-22:11:42.570 to 2000-062-22:54:25.644 (just shy of 43 minutes)

The transition to normal operations continues as the FOT has begun running our morning status meeting as Project Leads begin the handover.

Limited Life Item Status:

All limited life items are well within lifetime ranges. The precise statistics for each item have been received from LMMS/Valley Forge and will be incorporated next week.